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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,251	02/06/2006	Masumi Dakemoto	1163-0550PUS1	3052

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EXAMINER
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VIRANY, LESLIE R

ART UNIT	PAPER NUMBER
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2622

NOTIFICATION DATE	DELIVERY MODE
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01/14/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/567,251	<b>Applicant(s)</b> DAKEMOTO ET AL.	
	<b>Examiner</b> LESLIE VIRANY	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/06/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2 & 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama (US 6573933) in view of Weldy. (US 6771311)

Regarding claim 1, Takayama teaches an image pickup apparatus comprising: a solid-state image pickup device for acquiring an image signal by photoelectric conversion of an optical image formed; signal amplifying means [Fig. 5 driver 55] for amplifying, as to the image signal supplied from said solid-state image pickup device, all pixels. [Fig. 2 Gain element 6]

Takayama fails to teach: of color components of an image according to given gains of the individual color components; calculating individual color component average pixel values as claimed.

However Weldy teaches average value calculating means [Col. 8, lines 1 - 8, note that predictors may be derived from individual colour channels and are derived from averaging] for calculating average values of pixel values of individual color components constituting an image of each frame generated by said signal amplifying means; and [Col. 3, lines 62 – 65] gain calculating means for calculating, for

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the number of frames in one cycle of flicker generation, maximum values of the average values of the pixel values of the individual color components of the image,

Takayama further teaches which average values are calculated by said average value calculating means, [Fig.3, step S35] for calculating, according to the maximum values, gains for adjusting to a maximum range the average values of the pixel values of the individual color components constituting other images, [Fig. 2 Gain controller 6] and for outputting the gains as gains of the individual color components to be supplied to said signal amplifying means. [Fig. 1 output section 8]

It would have been obvious to one having ordinary skill in the art at the time of invention to have incorporated the color component-based average value computing method of Weldy in the camera with the field-based average value computation of Takayama in order to provide a camera with two additional bases for flicker correction computation, as taught by Weldy

Regarding claim 2, claim 2 is directed towards a digital enhancements of the devices disclosed in claim 1 wherein gain calculation is accomplished through digital means. Takayama further teaches an A/D converter and digital gain calculation means. [Fig. 1 A/D converter not shown and digital gain controller 6, see discussion pp.5]

Regarding claim 5, claim 5 is directed towards average value calculating means, exceeds a predetermined value, said digital gain calculating means halts update of the digital gains of the device disclosed in claim 2, addressed above. Takayama in view of Weldy teach the limitations as discussed above in connection with claim 2 but does not explicitly teach halting update of the average value calculations when fluctuation

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exceeds a predetermined value, as claimed. Examiner takes official notice that it is common knowledge in the art to cease acquiring new data when the data becomes demonstrably out of range.

2. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama in view of Weldy in further view of Stoll. (US 20050062625)

Regarding claim 3. claim 3 is directed towards the use of digital gain calculation in the device disclosed in claim 2, addressed above Takayama in view of Weldy teach the limitations as discussed above in connection with claim 2 but fail to teach calculation of flicker cycle deviation as claimed.

However Stoll teaches digital gain calculating means calculates deviation of a flicker generation cycle caused by a power supply frequency error from average values.  
[0027]

It would have been obvious to one having ordinary skill in the art at the time of invention to have incorporated the power supply frequency compensator of Stoll in the flicker-correcting camera of Takayama in view of Weldy in order to prevent interference between power supply frequency and clocked camera frame frequency, as taught by Stoll.

3. Claims 4, 6 & 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama in view of Weldy in further view of Kim. (US 20040080630)

Regarding claim 4, claim 4 is directed towards sine wave data calculating means of the device disclosed in claim 2, addressed above Takayama in view of Weldy teach the limitations as discussed above in connection with claim 2 but fail to teach sine wave data calculating as claimed.

However Kim teaches sine wave data calculating means for calculating, by using a sine wave data table prepared in advance, sine wave data for estimating deviation of a next cycle of the flicker generation according to a sine wave data table number input, [FIG. 7, ROM table 520] wherein said digital gain calculating means calculates deviation of a flicker generation cycle caused by a power supply frequency error from average values of pixel values.

It would have been obvious to one having ordinary skill in the art at the time of invention to have incorporated the sine wave data of Kim in the flicker-correcting camera of Takayama in view of Weldy in order to alleviate processor-intensive calculating during photographing, as taught by Kim.

Regarding claim 6. claim 6 is directed towards enhancements of the devices disclosed in claim 2, addressed above. Takayama in view of Weldy teach the limitations as discussed above in connection with claim 2 but fail to teach exposure time calculating means as claimed.

However Kim teaches comprising exposure time calculating means for calculating, as to the number of frames of one cycle of the flicker generation, a maximum value of the average values of the pixel values of a particular color component. [Fig. 5, integration time controller 53]

It would have been obvious to one having ordinary skill in the art at the time of invention to have incorporated the exposure time calculating means of Kim in the flicker-correcting camera of Takayama in view of Weldy in order to adjust the exposure time to match the flicker, as taught by Kim.

Regarding claim 7, claim 7 is directed towards enhancements of the device disclosed in claim 2, addressed above. Takayama in view of Weldy teach the limitations as discussed above in connection with claim 2 and but fail to teach analog signal amplification as claimed.

However Kim teaches comprising analog signal amplifying means, which is placed before said AD converter, for amplifying an analog image signal supplied from said solid-state image pickup device according to a given analog gain of the individual color components; [Fig.1, programmable amplifying unit 14, note placed before ADC]

It would have been obvious to one having ordinary skill in the art at the time of invention to have incorporated the analog signal amplification of Kim in the flicker-correcting camera of Takayama in view of Weldy in order to alleviate processor-intensive calculating during photographing, as taught by Kim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LESLIE VIRANY whose telephone number is (571)270-5893. The examiner can normally be reached on M-Th 7:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571)272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LV

/Lin Ye/  
Supervisory Patent Examiner, Art Unit 2622